Melanuria in the Diagnosis of Metastatic Melanoma

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Key words: dark urine, melanuria, melanoma

(Intern Med 51: 1649, 2012)

A 61-year-old Japanese man with a neoplasm of unknown primary origin without skin lesions was admitted to our department. Computed tomography showed multiple metastatic lesions in the lung, liver, spleen, bilateral adrenal gland, and bone (Picture 1). Moreover, the patient had been suffering from melanuria for 1 month (Picture 2, 3). Cytological urine examination showed tumor cells with brownish-red granules containing increased amounts of melanin precursors. The level of serum 5-S-cysteinyldopa (5-S-CD), a serum tumor marker for melanoma, was 45.4 nmol/L (normal range, 1.5-8.0 nmol/L). We diagnosed the patient as having melanoma with multiple metastases. Melanuria is quite common, occurring in approximately 15% metastatic melanoma cases. It occurs due to the excretion of melanin precursors that undergo auto-oxidation to melanin in air or in the extracellular melanin granules in the urine (1). Therefore, melanuria is extremely useful for the diagnosis of melanoma.

The authors state that they have no Conflict of Interest (COI).

Reference


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Received for publication February 22, 2012; Accepted for publication February 22, 2012

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